

REMARKS

1           Applicant respectfully requests reconsideration and allowance of the  
2 subject application. Claims 1-11, 13-15, and 17-28 are pending in the application.  
3 Claims 34-39 have been canceled without prejudice or disclaimer of the subject  
4 matter therein. Claims 1, 13, and 22 are independent claims and each of these  
5 claims have been amended hereby.

6           The Office Action of March 15, 2006 has been carefully considered by the  
7 Applicant. Claims 1-11, 13-15, 17-28 and 34-39 stand rejected under 35 U.S.C.  
8 §103(a) as being unpatentable over U.S. Patent No. 6,130,911 to Parker et al.  
9 (hereinafter referred to as the Parker reference) in view of US Patent No.  
10 6,415,396 to Singh et al. (hereinafter referred to as the Singh reference).

11           In overview, by the present Amendment, the rejections have been traversed  
12 in view of the following remarks. The Applicant respectfully requests  
13 reconsideration and allowance of the subject application. This Amendment is  
14 believed to be fully responsive to all issues raised in the Office Action of March  
15 15, 2006.

16           Claim Rejection Under 35 USC §103(a)

17           Claims 1-11, 13-15, 17-28 and 34-39 stand rejected under 35 U.S.C.  
18 §103(a) as being unpatentable over the Parker reference in view of the Singh  
19 reference. For at least some of the reasons that follow, Applicant respectfully  
20 disagrees that the subject matter of the above claims is obvious given the above  
21 cited references.

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1      *Review of the Cited References*

2      The Parker reference describes automatic testing using a script. In  
3      particular, the Parker reference describes a way in which the script could be  
4      written so that the script could be used to test the application on multiple  
5      platforms, such as OPENLOOK, MOTIF, MACINTOSH, and MICROSOFT  
6      WINDOWS environments.

7      Table 2, Columns 2 and 9 of the Parker reference shows several example  
8      script entries that may be used during a testing process. The Table 2 shows that  
9      entries must first be entered into the script before they can be used to test a GUI.  
10     Parker explicitly states that the "test executive passes the GUI specific command  
11     to the test driver. The test driver then performs the actual action o the GUI object  
12     specified in the test script command. (See column 8, lines 20-24.)

13     The Singh reference, as described in the Summary, is directed at an  
14     apparatus and method for generating and maintaining a regression test case set  
15     directly and automatically from requirement models. The Summary further  
16     defines a regression test case as a set of test cases that are used by the user to  
17     verify functionality in view of modifications or additions to the system. The Singh  
18     reference describes the use of a graph representation for automatically generating  
19     an optimum number of scenarios for testing. (See col. 8, lines 31-34.) An  
20     operator constructs the directed graph from a written body of requirements or from  
21     some other requirements models or formalism. (See col. 10, lines 41-44.) The  
22     Singh reference teaches that a user can select specific test cases in the regression  
23     test case set to determine what affect, if any, the additional or new features have  
24     on the remaining functionality. (See col. 13, lines 7-10.) The Singh reference is  
25     silent on the testing of GUI applications. Rather, the Singh reference is directed at

1 testing procedural logic within a software application. In addition, the features  
2 and the order for testing the features are determined at the time that the directed  
3 graph is created.

4 *Traversal of Rejected Claims Based on the Cited References*

5 Amended Claim 1 recites:

6 A method for testing, the method comprising:  
7 retrieving information descriptive of a graphics element rendered  
during execution of the software being tested, the information identifying  
an executable feature associated with the graphics element;  
8 storing an association between the executable feature and the  
graphics element in a map data structure containing information related  
to at least one graphics element for testing, the association being stored in  
the map data structure during execution of the software being tested;  
9 executing the executable feature associated with the graphics  
element; and  
10 updating the association in the map data structure upon execution of  
the executable feature.

11 The present invention “provides a systematic approach to exploring  
12 features of a GUI of a software application.” See page 12, lines 21-22, of the  
13 present Application.) In general, the systematic approach is determined based on  
14 information retrieved with respect to “a graphics element rendered during  
15 execution of a software application being tested” as recited in independent Claims  
16 1 and recited in similar manners for the other independent Claims 13 and 22.  
17 Thus, the determination of what features are tested are determined automatically  
18 during the testing of the target application. This is in direct contrast to the  
19 teachings of the Parker reference which teaches that a script is written that  
20 determines what features are tested and in what order the features are tested. This  
21 is also in contrast to the teaching of the Singh reference which teaches to construct  
22 a directed graph which determines what features and what order the features are  
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1 tested. Thus, the Examiner has not cited any reference that teaches or suggests the  
2 claimed invention. In fact, even if all of these references could be combined, their  
3 teachings could not possibly suggest the present invention. In addition, there is no  
4 suggestion or motivation to combine these references.

5 Claim 1 further recites “storing an association between the executable  
6 feature and the graphics element in a map data structure containing information  
7 related to at least one graphics element for testing, the association being stored  
8 in the map data structure during execution of the software being tested.” The  
9 Parker reference does not describe such a process. The testing script according  
10 to the Parker reference is not dynamic during the testing process. It is produced  
11 before testing occurs; if changes are required, they must be made by a human  
12 and while testing is not occurring. More specifically, the associations between  
13 an executable feature and a graphics element are determined before a testing  
14 process occurs. These associations are accounted for in the testing script. This  
15 is explicitly shown in Table 2 of the Parker reference. In distinction, the claims  
16 of the present invention recite that an association is stored “during execution of  
17 the software being tested.” Thus, the testing process according to the instant  
18 application has dynamic functionality. The other independent claims of the  
19 instant application set forth similar subject matter as that found in Claim 1.

20 Parker teaches that the testing script can “identify GUI objects at the GUI  
21 superclass level” without the use of GUI-specific names. (See column 16, lines  
22 53-56.) The identification of GUI objects is done after the testing script was  
23 created. Parker discloses that a test tool is used to “ask the GUI about an  
24 object’s location and state just before making use of the information in order to  
implement the test script’s request.” (See column 16 and 17, lines 64-67 and line

1, respectively.) Again modification of the testing script is not undertaken as  
2 part of the requesting process. Parker states that the mapping “between high-  
3 level logical object names and actual runtime GUI object names is one of the  
4 most challenging tasks performed by the test tool. The test tool is not the testing  
5 script and no modification of to testing script occurs as a result of the actions  
6 taken by the test tool. Therefore, this particular disclosure of the Parker  
7 reference also does not teach or suggest “storing an association between the  
8 executable feature and the graphics element in a map data structure containing  
9 information related to at least one graphics element for testing, the association  
10 being stored in the map data structure during execution of the software being  
11 tested.” (See Claim 1.) The other independent claims of the instant application  
12 set forth similar subject matter as that found in Claim 1.

13 Thus, for at least one or more of the above reasons, the Applicant contends  
14 that the Parker reference, whether considered alone or with any permissible  
15 combination of prior art of record, does not teach or suggest each limitation recited  
16 in independent Claims 1, 13, and 22. Therefore, the Applicant respectfully  
17 submits that the §103 rejection of independent Claims 1, 13, and 22 is improper,  
18 and respectfully requests reconsideration and withdrawal of this rejection.

19 Furthermore, the dependent claims include other limitations that are not  
20 taught or suggested by the prior art of record. For example, “selecting executable  
21 features in a depth-first mode of operation,” “selecting executable features in a  
22 breadth-first mode of operation,” and other limitations are not taught or suggested.  
23 Therefore, for at least the above reasons, Applicant respectfully submits that the  
24 §103 rejection of dependent Claims 2-11, 14-15, 17-21, 23-28 is improper, and  
25 respectfully requests reconsideration and withdrawal of this rejection.

1        *Legal Framework*

2        In overview, as stated in MPEP § 2143, to establish a *prima facie* case of  
3        obviousness, three basic criteria must be met. First, there must be some  
4        suggestion or motivation, either in the references themselves or in the knowledge  
5        generally available to one of ordinary skill in the art, to modify the reference or to  
6        combine reference teachings. Second, there must be a reasonable expectation of  
7        success. Finally, the prior art reference (or references when combined) must teach  
8        or suggest all the claim limitations. The teaching or suggestion to make the  
9        claimed combination and the reasonable expectation of success must both be  
10      found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20  
11      USPQ2d 1438 (Fed. Cir. 1991).

12      Further, as stated in MPEP § 2143.01, obviousness can only be established  
13      by combining or modifying the teachings of the prior art to produce the claimed  
14      invention where there is some teaching, suggestion, or motivation to do so found  
15      either in the references themselves or in the knowledge generally available to one  
16      of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir.  
17      1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). The mere  
18      fact that references can be combined or modified does not render the resultant  
19      combination obvious unless the prior art also suggests the desirability of the  
20      combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

21      Therefore, "all words in a claim must be considered in judging the  
22      patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 165  
23      USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35  
24      U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837  
25      F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

With this legal framework in mind and for the additional reasons explained above, the Applicant respectfully submits that the current rejection under 35 U.S.C. §103(a) is improper and must be withdrawn. **Conclusion**

4 Applicant has considered the other references cited by the Examiner in the  
5 Office Action. None of these references appear to affect the patentability of  
6 Applicant's claims. By the foregoing remarks, Applicant believes that pending  
7 claims are allowable and the application is in condition for allowance. Therefore,  
8 a Notice of Allowance is respectfully requested. Should the Examiner have any  
9 further issues regarding this application, the Examiner is requested to contact the  
10 undersigned attorney for the Applicant at the telephone number provided below.

Respectfully Submitted,

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